07-17-06

Express Mail No. EV813999021US

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TRANSMITTAL OF APPEAL BRIEF

Docket No.
249768029US

In re Application of: Suresh Kumer

Application No.	Filing Date	Examiner	Group Art Unit
09/531,703-Conf. #6170	March 20, 2000	F. Poinvil	3628

Invention: METHOD AND SYSTEM FOR BIDDING ON MULTIPLE AUCTIONS

TO THE COMMISSIONER OF PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed: December 15, 2005 .

The fee for filing this Appeal Brief is $ 500.00 .

[x] Large Entity [ ] Small Entity

[x] A petition for extension of time is also enclosed.

The fee for the extension of time is $ 2,160.00 .

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Dated: 7/14/06

Do Te Kim
Attorney Reg. No. : 46,231
PERKINS COIE LLP
P.O. Box 1247
Seattle, Washington 98111-1247
(206) 359-8000

Application No.: 09/531,703 Docket No.: **249768029US**

Express Mail No. EV813999021US
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Suresh Kumar

Application No.: 09/531,703 Confirmation No.: 6170

Filed: March 20, 2000 Art Unit: 3628

For: METHOD AND SYSTEM FOR BIDDING ON MULTIPLE AUCTIONS Examiner: F. Poinvil

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As required under 37 C.F.R. § 41.37(a), this brief is in furtherance of the Notice of Appeal in this application filed on December 15, 2005. The fees required under 37 C.F.R. § 41.20(b)(2), and any required petition for extension of time for filing this brief and associated fees, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37. The complete Table of Contents follows.

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CONTENTS

I. REAL PARTY IN INTEREST

The real party in interest is Amazon.com, Inc., of Seattle, Washington.

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

Neither Appellant, Appellant's legal representative, nor the above-identified Assignee is aware of other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the present appeal.

III. STATUS OF CLAIMS

Claims 1-47 have been presented, are presently pending, and stand finally rejected. Claim 7 has been canceled in the present appeal.

Claims 1-6, 8-32 and 40-47 are the subject of the present appeal. The text of these claims is set forth below in the Claims Appendix.

IV. STATUS OF AMENDMENTS

While Appellant filed on August 19, 2005, a response to a second final Office Action dated June 16, 2005, Appellant made no amendments to the claims in the response.

An amendment to pending claim 7 has been submitted with this appeal. The amendment cancels claim 7, as it is identical to pending claim 5.

An amendment to pending claim 14 has been submitted with this appeal. The amendment corrects an inadvertent placement of a "," (specifically, the movement of the "," from after the word "bidding" to after the word "auction").

An amendment to pending claim 27 has been submitted with this appeal. The amendment corrects a typographical error (specifically, the substitution of a "," for a ";").

An amendment to pending claim 33 has been submitted with this appeal. The amendment corrects a typographical error (specifically, the substitution of "bids at" for "bid on").

An amendment to pending claim 46 has been submitted with this appeal. The amendment corrects a typographical error (specifically, the insertion of "of" after the word "plurality").

An amendment to pending claim 47 has been submitted with this appeal. The amendment corrects a typographical error (specifically, the substitution of "auctions" for "auction").

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present application includes four independent claims. Each independent claim is paraphrased below, with citations to the corresponding portions of the specification and drawing as required by 37 C.F.R. § 41.37(c)(1)(v). These citations are provided in order to illustrate specific examples and embodiments of the recited claim language, and are not intended to limit the claims.

A. Independent Claims on Appeal

The rejected independent claims are directed to various techniques for bidding on multiple auctions in accordance with bidding techniques specified by a bidder. The independent claims are described as follows:

1. Claim 1

Claim 1 is directed to a method performed by a computer system for bidding on auctions, the method comprising: receiving an indication of a plurality of auctions (*See, e.g.,* Specification, 4:24-29, 5:22-6:6, 6:20-30, 7:9-18); receiving an indication of a bidding technique to apply to the indicated auctions (*See, e.g.,* Specification, 4:24-29, 5:22-6:6, 6:20-30, 7:9-18); and participating in some of the indicated auctions in accordance with the indicated bidding technique (*See, e.g.,* Specification, 5:2-4, 6:6-7, 6:31-7:1, 7:18-19).

2. Claim 10

Claim 10 is directed to a method in a computer system for inputting multiple auction bidding requirements, the method comprising: receiving an indication of a plurality of auctions (*See, e.g.,* Specification, 4:24-29, 5:22-6:6, 6:20-30, 7:9-18); and receiving an

indication of a bidding technique to apply to the indicated auctions (*See, e.g.,* Specification, 4:24-29, 5:22-6:6, 6:20-30, 7:9-18).

3. Claim 22

Claim 22 is directed to a computer system for bidding on auctions, the system comprising: a bidding plan storage device (*See, e.g.,* Specification, 8:13-15); a define bid component that receives a bidding plan that specifies to bid at multiple auctions and that stores the received bidding plan in the bidding plan storage device (*See, e.g.,* Specification, 4:24-29, 5:22-6:6, 6:20-30, 7:9-18, 8:19-22); and a bidding engine that retrieves the bidding plan from the storage device and places bids at auctions in accordance with the bidding plan (*See, e.g.,* Specification, 5:2-4, 6:6-7, 6:31-7:1, 7:18-19, 8:22-23).

4. Claim 40

Claim 40 is directed to a computer-readable medium containing instructions for causing a computer system to bid at auctions, by a method comprising: receiving an indication of a plurality of auctions (*See, e.g.,* Specification, 4:24-29, 5:22-6:6, 6:20-30, 7:9-18); receiving an indication of a bidding technique to apply to the indicated auctions (*See, e.g.,* Specification, 4:24-29, 5:22-6:6, 6:20-30, 7:9-18); and participating in some of the indicated auctions in accordance with the indicated bidding technique (*See, e.g.,* Specification, 5:2-4, 6:6-7, 6:31-7:1, 7:18-19).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. The Office Action's Rejections

The Office Action rejected all of the pending claims on the following bases:

1. Claims 1, 10, and 40 stand rejected under 35 U.S.C. § 102(e) over Ausubel.

2. Claims 2-6, 8, 9, 11-32, and 41-47 stand rejected under 35 U.S.C. § 103(a) over Ausubel.

B. The Issues on Appeal

The issues on appeal, and the specific pending claims to which each relates, are:

1. Whether Ausubel discloses a bidding technique to apply to multiple auctions. The decision on this issue impacts all pending claims on appeal.

2. Whether the Office Action's position that an auction for multiple items is the same as multiple auctions is correct. The decision on this issue impacts all pending claims on appeal.

3. Whether Ausubel discloses taking an action at one auction based on the results of another auction that has ended. The decision on this issue impacts claims 5, 8, 13-16, 20, 27, 29, 30, 43, and 44.

4. Whether the Office Action has indicated how every claim element of claims 4, 6, 12, 17, 18, 21, 24-26, 32, and 46 is disclosed in the prior art. The decision on this issue impacts claims 4, 6, 12, 17, 18, 21, 24-26, 32, and 46.

VII. ARGUMENTS

A. Rejections Under 35 U.S.C. § 102(e)

1. Overview

Appellant's invention is generally directed to an auction bidding system that allows a bidder to direct automatic bidding at multiple auctions in accordance with bidding techniques specified by the bidder. Bidding techniques are rules for managing sequential and/or parallel bidding on multiple auctions. To direct the automatic bidding, the bidding system allows the bidder to specify the auctions at which the bids may be placed. The bidding system also allows the bidder to specify the bidding technique that should be used when bidding at the specified auctions on the bidder's behalf. Once the auctions and the bidding technique are specified, the bidding system participates in the specified auctions in accordance with the specified bidding technique. The bidding system thus acts as a bidding agent to place bids on behalf of the bidder at multiple auctions.

U.S. Patent No. 6,021,398 to Ausubel ("Ausubel") purportedly discloses a dynamic auction system that allows flexible bidding by participants in a single auction by combining some of the advantageous facets of the sealed-bid format with the basic advantages of the ascending-bid format. Ausubel, 1:62-66; 8:20-22. According to Ausubel, an auction system conducts a single auction for multiple objects, and bidders may submit bidding rules for the auction into the auction system's database. The auction system allows a bidder to submit his or her bidding rules at any time during the auction. A bidder's bidding rules may become relevant at future times and prices during the auction, and indicate the bidder's willingness to make an unconditional bid or a conditional bid in the auction. *Id.*, 1:66-2:31. The auction system then conducts a single auction for multiple objects by interacting with the database that contains the bidding rules that were submitted by the bidders for the auction. Appellant respectfully submits that Ausubel does not disclose a bidding technique to apply to multiple auctions.

Appellant agrees with the Office Action that Ausubel fails to teach taking an action at one auction based upon results of another auction.

Ausubel has no teaching or suggestion that an action is taken at one auction based upon winning another auction. In accordance with the teachings of Ausubel, multiple items are simultaneously offered for sale and bidders submit bids on combinations of the items offered for sale up until the auction's closing time. At the close of the auction, the offered items are sold to the winning bidders according to the winning bids. Thus, winning bids for all of the items are determined at the close of the auction.

Many of the claims recite at least one element which the Office Action failed to indicate as being disclosed in the prior art. Since there are many such elements, Appellant will address each element separately below in the discussion of the claims.

2. Rejection of Claim 1

In its entirety, claim 1 stands rejected under 35 U.S.C. § 102(e) over Ausubel. Independent claim 1 reads as follows:

> A method performed by a computer system for bidding on auctions, the method comprising:
>
> receiving an indication of a plurality of auctions;
>
> receiving an indication of a bidding technique to apply to the indicated auctions; and
>
> participating in some of the indicated auctions in accordance with the indicated bidding technique.

Ausubel does describe the use of flexible bidding rules, but not for placing bids at multiple auctions. Rather, Ausubel's bidding rules are for placing bids at a single auction for multiple items, as explained by illustrative example applications of the bidding rules to the following types of auctions:

- "a securities firm sought to sell shares of stock via an auction," *id.*, 10:41-42;
- "a nation's central bank sought to simultaneously sell a fixed quantity of three-month and six-month treasury bills via a dynamic auction," *id.*, 13:11-14;
- "a region's electric power pool sought to arrange for the production of electric power at various times of day via a dynamic auction," *id.*, 13:51-54;
- "an efficient auction for multiple dissimilar objects," *id.*, 14:16-17;
- "the Vickrey auction for multiple, dissimilar objects," *id.*, 21:39-40;
- "the efficient auction for multiple dissimilar objects," *id.*, 22:29-30;
- "an auction where users submit bids for subsets of the available units," *id.*, 25:50-51;
- "an auction for multiple but possibly-dissimilar objects . . . will be referred to as the 'generalized English auction'," *id.*, 27:65-28:5; and
- "the generalized English auction, as implemented in the dynamic flexible bidding system," *id.*, 32:56-57.

In each of Ausubel's illustrative examples referenced above, the auction is a single auction for multiple objects. In each of the above-referenced examples, multiple items are simultaneously offered for sale, and bidders are allowed to submit bids on combinations of the offered items up until the auction's closing time. At the close of the auction, the offered items are sold to the winning bidders according to the winning bids. For example, Ausubel's securities firm example is an auction for a multiple number of shares of stock at corresponding prices per share, and bidders submit bids for a desired quantity of shares at a specified price. Similarly, Ausubel's treasury bank example is an auction for a fixed quantity of three-month and six-month treasury bills at corresponding interest rates, and bidders submit bids for desired quantity of three-month and six-month treasury bills at the offered interest rates. Likewise, Ausubel's electric power pool example is an auction for providing electric power at various periods of the day at corresponding prices per kilowatt-hour, and bidders submit bids to provide quantities of electric power at various periods of the day at the offered prices. None of the above-referenced examples of Ausubel are multiple auctions.

As stated above, none of the illustrated examples in Ausubel teaches or suggests that a bidding technique is applied to multiple auctions. Nevertheless, it is the Office Action's position that a single auction for multiple items is the same as multiple auctions.[1] Appellant respectfully submits that those skilled in the auction art do not consider a single auction for multiple items to be the same as multiple auctions. As an example, Prof. Vijay Krishna of the Pennsylvania State University, in discussing multiple object (e.g., item) auctions in his book entitled Auction Theory, makes clear the distinction between "multiple auctions" and "a single auction of multiple items." Prof. Krishna states that multiple objects can be sold "separately in *multiple auctions* or jointly in a *single auction*." VIJAY KRISHNA, AUCTION THEORY 165 (Academic Press, ed., Elsevier Science) (2002). Prof. Krishna further elaborates that "[i]n the former case [i.e., selling multiple objects separately in multiple auctions], the **objects are sold one at a time in separate auctions** – conducted

[1] The Office Action states that "an auction of a plurality of items is an indication of a plurality of auctions." Office Action, June 16, 2005, p. 3.

sequentially, say – in a way that the bids in the auction for one of the objects do not directly influence the outcome of the auction for another," and that "[i]n the latter case [i.e., selling multiple objects jointly in a single auction], the **objects are sold at one go in a single auction**, but not necessarily all to the same bidder." *Id.* (emphasis added). Although the Office Action states to the contrary, Appellant has not been provided any support for the seemingly contrary position. Appellant respectfully asserts that the Office Action's assertion that a single auction for multiple items is identical to multiple auctions is contrary is how one skilled in the art views such an auction.

In each of Ausubel's illustrative examples referenced above, the auction is a single auction for multiple objects. As explained above, an auction for multiple items is not the same as multiple auctions. Accordingly, even assuming for the sake of argument that bidding rules are analogous to a bidding technique, using bidding rules for placing bids at a single auction for multiple items is not a bidding technique to apply to multiple auctions.

Anticipation requires that each claim element must be identical to a corresponding element in the applied reference. *Glaverbel Société Anonyme v. Northlake Mktg. & Supply, Inc.*, 45 F.3d 1550, 1554 (Fed. Cir. 1995). Indeed, the failure to mention "a claimed element (in) a prior art reference is enough to negate anticipation by that reference." *Atlas Powder Co. v. E.I. duPont De Nemours*, 750 F.2d 1569, 1574 (1984). To establish a *prima facie* case of anticipation, the Examiner must identify where "each and every facet of the claimed invention is disclosed in the applied reference." *Ex parte Levy,* 17 U.S.P.Q.2d 1461, 1462 (Bd. Pat. App. & Interf. 1990). As such, the Office Action has not established a *prima facie* case of anticipation, and the rejection of claim 1 should be withdrawn.

3. Rejection of Claim 10

Independent claim 10 reads as follows:

> A method in a computer system for inputting multiple auction bidding requirements, the method comprising:
>
> receiving an indication of a plurality of auctions; and

> receiving an indication of a bidding technique to apply to the indicated auctions.

Claim 10 stands rejected under 35 U.S.C. § 102(e) over Ausubel. Claim 10 recites a bidding technique to apply to multiple auctions, specifically, "receiving an indication of a bidding technique to apply to the indicated auctions." As described above with respect to claim 1, Ausubel does not teach a bidding technique to apply to multiple auctions. As such, the Office Action has not established a *prima facie* case of anticipation, and the rejection of claim 10 should be withdrawn.

4. Rejection of Claim 40

Independent claim 40 reads as follows:

> A computer-readable medium containing instructions for causing a computer system to bid at auctions, by a method comprising:
>
> receiving an indication of a plurality of auctions;
>
> receiving an indication of a bidding technique to apply to the indicated auctions; and
>
> participating in some of the indicated auctions in accordance with the indicated bidding technique.

Claim 40 stands rejected under 35 U.S.C. § 102(e) over Ausubel. Claim 40 recites a bidding technique to apply to multiple auctions, specifically, "receiving an indication of a bidding technique to apply to the indicated auctions." As described above with respect to claims 1 and 10, Ausubel does not teach a bidding technique to apply to multiple auctions. As such, the Office Action has not established a *prima facie* case of anticipation, and the rejection of claim 40 should be withdrawn.

B. Rejections Under 35 U.S.C. § 103(a)

1. Legal Standards for Obviousness

The Office Action rejected claims 2-6, 8, 9, 11-21, 22-32, and 41-47 under 35 U.S.C. § 103(a), which provides:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

To reject claims as being obvious, "the examiner bears the initial burden of presenting a *prima facie* case of obviousness." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d (BNA) 1955, 1956 (Fed. Cir. 1993). "A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *Id.* (quoting *In re Bell*, 991 F.2d 781, 782, 26 U.S.P.Q.2d (BNA) 1529, 1531 (Fed. Cir. 1993)). The Examiner is not allowed to use hindsight gleaned from the invention itself to modify references. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1050-51 (Fed. Cir. 1988). Furthermore, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992). Although a prior art device "may be capable of being modified to run the way [the patent applicant's] apparatus is claimed, there must be a suggestion or motivation in the reference to do so." *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990).

2. Rejection of Claim 22

Independent claim 22 reads as follows:

> A computer system for bidding on auctions, the system comprising:
>
> a bidding plan storage device;
>
> a define bid component that receives a bidding plan that specifies to bid at multiple auctions and that stores the received bidding plan in the bidding plan storage device; and
>
> a bidding engine that retrieves the bidding plan from the storage device and places bids at auctions in accordance with the bidding plan.

Claim 22 stands rejected under 35 U.S.C. § 103(a) over Ausubel. As described above with respect to claims 1, 10, and 40, Ausubel does not teach a bidding technique to apply to multiple auctions. In a similar manner, Ausubel does not teach a bidding plan to apply to multiple auctions. In rejecting this claim, the Office Action relies on the assertion that "an auction of a plurality of items is an indication of a plurality of auctions." Accordingly, the Office Action asserts that bidding rules for placing bids at an auction for multiple items is an indication of a bidding plan to apply to multiple auctions.

As explained above, an auction for multiple items is not the same as multiple auctions. The Office Action has not pointed to anything in Ausubel that suggests bidding rules for placing bids at multiple auctions. As such, the Office Action has not established a *prima facie* case of obviousness. Moreover, since there is no such suggestion in Ausubel, claim 22 is not obvious over Ausubel, and the rejection of claim 22 should be withdrawn.

3. Rejection of Claims 5, 8, 13, 14, 29, and 43

Claims 5 and 8 depend from claim 1, claims 13 and 14 depend from claim 10, claim 29 depends from claim 28 which depends from claim 22, and claim 43 depends from claim 42 which depends from claim 40. As described above with respect to claims 1, 10, 22, and 40, Ausubel fails to teach or suggest a bidding technique to apply to multiple auctions. Accordingly, for the same reasons discussed above with respect to claims 1, 10, 22, and 40, the rejection of claims 5, 8, 13, 14, 29, and 43 should be withdrawn.

Claims 5 and 13 add to the non-obviousness of the invention by reciting "the bidding technique includes bidding at an auction only after winning another auction." In rejecting this claim, the Office Action states that "[b]idding at an auction only after winning another auction would have been obvious to one of ordinary skill in the art because a bidder would have enough funds to use to apply at another auction." The Office Action's rationale of having "enough funds" is not a logical consequence of having won an auction. If a bidder wins an auction, the bidder would have fewer funds available. It is unclear to Appellant why a bidder would "have enough funds" simply because the bidder won another auction. If anything, the bidder would likely have fewer funds after paying the winning bid amount.

Because an auction for the multiple items has one closing time, and the items offered in the acution are sold to the winning bidders according to the winning bids at the close of the auction, Ausubel does not teach initiating an action in one auction based upon the results of another auction. Accordingly, Ausubel does not teach a bidding technique that includes bidding at an auction only after winning another auction. As such, the rejection of claims 5 and 13 should be withdrawn.

Claim 8 adds to the non-obviousness of the invention by reciting "the bidding technique includes a combination of placing a bid at the auction with the lowest current bid whenever being outbid, bidding at a first auction until reaching a maximum bid and then bidding on a second auction, and bidding at a second auction only after winning a first auction." As described above, Ausubel does not teach a bidding technique that includes bidding at an auction only after winning another auction. In a similar manner, Ausubel does not teach a bidding technique that includes a combination of placing a bid at the auction with the lowest current bid whenever being outbid, bidding at a first auction until reaching a maximum bid and then bidding on a second auction, and bidding at a second auction only after winning a first auction. As such, the rejection of claim 8 should be withdrawn.

Claim 14 adds to the non-obviousness of the invention by reciting "the bidding technique includes, in response to winning an auction, bidding at multiple auctions so that multiple bids are pending simultaneously." As described above, Ausubel does not teach a bidding technique that includes bidding at an auction only after winning another auction. In a similar manner, Ausubel does not teach a bidding technique that includes, in response to winning an auction, bidding at multiple auctions so that multiple bids are pending simultaneously. As such, the rejection of claim 14 should be withdrawn.

Claim 29 adds to the non-obviousness of the invention by reciting "the bidding plan indicates to bid at an auction only if a condition relating to another auction is satisfied" and "wherein the condition is winning the auction." As described above, Ausubel does not teach a bidding technique that includes bidding at an auction only after winning another

auction. In a similar manner, Ausubel does not teach a bidding plan that indicates to bid at an auction only if a condition relating to another auction is satisfied, wherein the condition is winning the auction. As such, the rejection of claim 29 should be withdrawn.

Claim 43 adds to the non-obviousness of the invention by reciting "the bidding technique indicates to bid at an auction only if a condition relating to another auction is satisfied" and "wherein the condition is winning the auction." As described above, Ausubel does not teach a bidding technique that includes bidding at an auction only after winning another auction. In a similar manner, Ausubel does not teach a bidding technique that indicates to bid at an auction only if a condition relating to another auction is satisfied, wherein the condition is winning the auction. As such, the rejection of claim 43 should be withdrawn.

4. Rejection of Claims 15, 16, 30, and 44

Claims 15 and 16 depend from claim 10, claim 30 depends from claim 28 which depends from claim 22, and claim 44 depends from claim 42 which depends from claim 40. As described above with respect to claims 10, 22, and 40, Ausubel fails to teach or suggest a bidding technique to apply to multiple auctions. Accordingly, for the same reasons discussed above with respect to claims 10, 22, and 40, the rejection of claims 15, 16, 30, and 44 should be withdrawn.

Claim 15 adds to the non-obviousness of the invention by reciting "the bidding technique includes bidding at an auction only after losing another auction." As described above, because an auction for the multiple items has one closing time, and the items offered in the auction are sold to the winning bidders according to the winning bids at the close of the auction, Ausubel does not teach initiating an action in one auction based upon the results of another auction. Accordingly, Ausubel does not teach a bidding technique that includes bidding at an auction only after losing another auction. As such, the rejection of claim 15 should be withdrawn.

Claim 16 adds to the non-obviousness of the invention by reciting "the bidding technique includes, in response to losing an auction, bidding at multiple auctions so that

multiple bids are pending simultaneously." As described above, Ausubel does not teach a bidding technique includes bidding at an auction only after losing another auction. In a similar manner, Ausubel does not teach a bidding technique that includes bidding at multiple auctions so that multiple bids are pending simultaneously in response to losing an auction. As such, the rejection of claim 16 should be withdrawn.

Claim 30 adds to the non-obviousness of the invention by reciting "the bidding plan indicates to bid at an auction only if a condition relating to another auction is satisfied" and "wherein the condition is losing the auction." As described above, Ausubel does not teach a bidding technique includes bidding at an auction only after losing another auction. In a similar manner, Ausubel does not teach a bidding plan that indicates to bid at an auction only if a condition relating to another auction is satisfied, wherein the condition is losing the auction. As such, the rejection of claim 30 should be withdrawn.

Claim 44 adds to the non-obviousness of the invention by reciting "the bidding technique indicates to bid at an auction only if a condition relating to another auction is satisfied" and "wherein the condition is losing the auction." As described above, Ausubel does not teach a bidding technique includes bidding at an auction only after losing another auction. In a similar manner, Ausubel does not teach a bidding technique that indicates to bid at an auction only if a condition relating to another auction is satisfied, wherein the condition is losing the auction. As such, the rejection of claim 44 should be withdrawn.

5. Rejection of Claim 20

Claim 20 depends from claim 19 which depends from claim 10. As described above with respect to claim 10, Ausubel fails to teach or suggest a bidding technique to apply to multiple auctions. Accordingly, for the same reasons discussed above with respect to claim 10, the rejection of claim 20 should be withdrawn.

Claim 20 adds to the non-obviousness of the invention by reciting "the bidding technique includes basing a decision to bid at an auction on whether a criterion is satisfied" and "wherein the criterion is based on the results of another auction." As described above, because an auction for the multiple items has one closing time, and the items offered in the

auction are sold to the winning bidders according to the winning bids at the close of the auction, Ausubel does not teach initiating an action in one auction based upon the results of another auction. Accordingly, Ausubel does not teach a bidding technique that includes basing a decision to bid at an auction on whether a criterion is satisfied, wherein the criterion is based on the results of another auction. As such, the rejection of claim 20 should be withdrawn.

6. Rejection of Claim 27

Claim 27 depends from claim 22. As described above with respect to claim 22, Ausubel fails to teach or suggest a bidding technique to apply to multiple auctions. Accordingly, for the same reasons discussed above with respect to claim 22, the rejection of claim 27 should be withdrawn.

Claim 27 adds to the non-obviousness of the invention by reciting "the bidding plan indicates to, upon winning a certain number of auctions, bid at that certain number of other auctions." As described above, because an auction for the multiple items has one closing time, and the items offered in the auction are sold to the winning bidders according to the winning bids at the close of the auction, Ausubel does not teach initiating an action in one auction based upon the results of another auction. Accordingly, Ausubel does not teach a bidding plan that indicates to, upon winning a certain number of auctions, bid at that certain number of other auctions. As such, the rejection of claim 27 should be withdrawn.

7. The Office Action Has Failed to Indicate How Every Element of Claims 4, 6, 12, 17, 18, 21, 24-26, 32, and 46 Is Disclosed in the Prior Art

Claims 4, 6, 12, 17, 18, 21, 24-26, 32, and 46 recite at least one element which the Office Action has failed to indicate as being disclosed in the prior art. For at least this reason, the Office Action has failed to establish a *prima facie* case of obviousness of these claims. In addition, Ausubel provides no suggestion or motivation to modify Ausubel to produce the additional elements of these claims.

a. Rejection of Claim 4

Claim 4 recites "[t]he method of claim 1 wherein the number of bids to place corresponds to the number of auctions that is desired to be won." The Office Action has failed to indicate how this claim element is disclosed by Ausubel. Appellant respectfully submits that Ausubel fails to teach or suggest the method of claim 1 wherein the number of bids to place corresponds to the number of auctions that is desired to be won. Because the Office Action has not met the *prima facie* burden for supporting an obviousness rejection and because Ausubel is insufficient to support an obviousness rejection, the rejection of claim 4 should be withdrawn.

b. Rejection of Claim 6

Claim 6 recites "[t]he method of claim 1 wherein the bidding technique includes bidding at an auction until reaching a maximum bid and then bidding at multiple auctions." The Office Action has failed to indicate how this claim element is disclosed by Ausubel. Appellant respectfully submits that Ausubel fails to teach or suggest the method of claim 1 wherein the bidding technique includes bidding at an auction until reaching a maximum bid and then bidding at multiple auctions. Because the Office Action has not met the *prima facie* burden for supporting an obviousness rejection and because Ausubel is insufficient to support an obviousness rejection, the rejection of claim 6 should be withdrawn.

c. Rejection of Claim 12

Claim 12 recites "[t]he method of claim 10 wherein the bidding technique includes winning at most a certain number of the auctions at the lowest price." The Office Action has failed to indicate how this claim element is disclosed by Ausubel. Appellant respectfully submits that Ausubel fails to teach or suggest the method of claim 10 wherein the bidding technique includes winning at most a certain number of the auctions at the lowest price. Because the Office Action has not met the *prima facie* burden for supporting an obviousness rejection and because Ausubel is insufficient to support an obviousness rejection, the rejection of claim 12 should be withdrawn.

d. Rejection of Claim 17

Claim 17 recites "[t]he method of claim 10 wherein the bidding technique includes not bidding at an auction after winning another auction." The Office Action has failed to indicate how these claim elements are disclosed by Ausubel. Appellant respectfully submits that Ausubel fails to teach or suggest the method of claim 10 wherein the bidding technique includes not bidding at an auction after winning another auction. Because the Office Action has not met the *prima facie* burden for supporting an obviousness rejection and because Ausubel is insufficient to support an obviousness rejection, the rejection of claim 17 should be withdrawn.

e. Rejection of Claim 18

Claim 18 recites "[t]he method of claim 10 wherein the bidding technique includes not bidding at an auction after losing another auction." The Office Action has failed to indicate how these claim elements are disclosed by Ausubel. Appellant respectfully submits that Ausubel fails to teach or suggest the method of claim 10 wherein the bidding technique includes not bidding at an auction after losing another auction. Because the Office Action has not met the *prima facie* burden for supporting an obviousness rejection and because Ausubel is insufficient to support an obviousness rejection, the rejection of claim 18 should be withdrawn.

f. Rejection of Claim 21

Claim 21 recites "[t]he method of claim 19 wherein the bidding technique includes basing a decision to bid at an auction on whether a criterion is satisfied" and "wherein the criterion is based on status of another auction." Claim 19 recites "[t]he method of claim 10 wherein the bidding technique includes basing a decision to bid at an auction on whether a criterion is satisfied." The Office Action has failed to indicate how this claim element is disclosed by Ausubel. Appellant respectfully submits that Ausubel fails to teach or suggest the method of claim 19 wherein the bidding technique includes basing a decision to bid at an auction on whether a criterion is satisfied, wherein the criterion is based on status of

another auction. Because the Office Action has not met the *prima facie* burden for supporting an obviousness rejection and because Ausubel is insufficient to support an obviousness rejection, the rejection of claim 21 should be withdrawn.

g. Rejection of Claim 24

Claim 24 recites "[t]he method of claim 22 wherein the bidding plan indicates to win at no more than a certain number of auctions." The Office Action has failed to indicate how this claim element is disclosed by Ausubel. Appellant respectfully submits that Ausubel fails to teach or suggest the method of claim 22 wherein the bidding plan indicates to win at no more than a certain number of auctions. Because the Office Action has not met the *prima facie* burden for supporting an obviousness rejection and because Ausubel is insufficient to support an obviousness rejection, the rejection of claim 24 should be withdrawn.

h. Rejection of Claim 25

Claim 25 recites "[t]he method of claim 22 wherein the bidding plan indicates to bid at an auction until reaching a maximum bid amount and then bidding at another auction." The Office Action has failed to indicate how this claim element is disclosed by Ausubel. Appellant respectfully submits that Ausubel fails to teach or suggest the method of claim 22 wherein the bidding plan indicates to bid at an auction until reaching a maximum bid amount and then bidding at another auction. Because the Office Action has not met the *prima facie* burden for supporting an obviousness rejection and because Ausubel is insufficient to support an obviousness rejection, the rejection of claim 25 should be withdrawn.

i. Rejection of Claim 26

Claim 26 recites "[t]he method of claim 22 wherein the bidding plan indicates to bid at an auction until reaching a maximum bid and then bidding at multiple auctions." The Office Action has failed to indicate how this claim element is disclosed by Ausubel. Appellant respectfully submits that Ausubel fails to teach or suggest the method of claim

22 wherein the bidding plan indicates to bid at an auction until reaching a maximum bid and then bidding at multiple auctions. Because the Office Action has not met the *prima facie* burden for supporting an obviousness rejection and because Ausubel is insufficient to support an obviousness rejection, the rejection of claim 26 should be withdrawn.

j. Rejection of Claim 32

Claim 32 recites "[t]he method of claim 22 wherein the multiple auctions are conducted by different entities." The Office Action has failed to indicate how this claim element is disclosed by Ausubel. Appellant respectfully submits that Ausubel fails to teach or suggest the method of claim 22 wherein the multiple auctions are conducted by different entities. Because the Office Action has not met the *prima facie* burden for supporting an obviousness rejection and because Ausubel is insufficient to support an obviousness rejection, the rejection of claim 32 should be withdrawn.

k. Rejection of Claim 46

Claim 46 recites "[t]he computer-readable medium of claim 40 wherein the plurality of auctions are conducted by different entities." The Office Action has failed to indicate how this claim element is disclosed by Ausubel. Appellant respectfully submits that Ausubel fails to teach or suggest the computer-readable medium of claim 40 wherein the plurality of auctions are conducted by different entities. Because the Office Action has not met the *prima facie* burden for supporting an obviousness rejection and because Ausubel is insufficient to support an obviousness rejection, the rejection of claim 46 should be withdrawn.

C. Conclusion

All the claims are directed to a bidding technique or plan for multiple auctions. Ausubel does not teach or suggest a bidding technique for multiple auctions. The Office Action's assertion that a single auction for multiple items is identical to multiple auctions is not supported by Ausubel and is contrary is how one skilled in the art views such an

auction. As such, the Office Action has not established that claims 1, 10, and 40 are anticipated or that claims 2-6, 8, 9, 11-32, and 41-47 are obvious in view of Ausubel.

Dated: 7/14/06

Respectfully submitted,

By _____

Do Te Kim
Registration No.: 46,231
PERKINS COIE LLP
P.O. Box 1247
Seattle, Washington 98111-1247
(206) 359-8000
(206) 359-7198 (Fax)
Attorneys for Appellant

CLAIMS APPENDIX

Claims Involved in the Appeal of Application Serial No. 09/531,703

1. (Previously Presented) A method performed by a computer system for bidding on auctions, the method comprising:

receiving an indication of a plurality of auctions;

receiving an indication of a bidding technique to apply to the indicated auctions; and

participating in some of the indicated auctions in accordance with the indicated bidding technique.

2. (Original) The method of claim 1 wherein the bidding technique includes placing a bid at the auction with the lowest current bid whenever being outbid.

3. (Original) The method of claim 1 wherein the bidding technique includes placing a bid at more than one of the plurality of auctions so that multiple bids are pending simultaneously.

4. (Original) The method of claim 3 wherein the number of bids to place corresponds to the number of auctions that is desired to be won.

5. (Original) The method of claim 1 wherein the bidding technique includes bidding at an auction only after winning another auction.

6. (Original) The method of claim 1 wherein the bidding technique includes bidding at an auction until reaching a maximum bid and then bidding at multiple auctions so that multiple bids are pending simultaneously.

7. (As amended in current submission.) ~~The method of claim 1 wherein the bidding technique includes bidding at an auction only after winning another auction.~~

8. (Original) The method of claim 1 wherein the bidding technique includes a combination of placing a bid at the auction with the lowest current bid whenever being outbid, bidding at a first auction until reaching a maximum bid and then bidding on a second auction, and bidding at a second auction only after winning a first auction.

9. (Original) The method of claim 1 wherein the bidding technique includes not bidding on an auction when the current bid of that auction exceeds a maximum bid.

10. (Original) A method in a computer system for inputting multiple auction bidding requirements, the method comprising:

receiving an indication of a plurality of auctions; and

receiving an indication of a bidding technique to apply to the indicated auctions.

11. (Original) The method of claim 10 including receiving an indication of a maximum bid for an auction.

12. (Original) The method of claim 10 wherein the bidding technique includes winning at most a certain number of the auctions at the lowest price.

13. (Original) The method of claim 10 wherein the bidding technique includes bidding at an auction only after winning another auction.

14. (As amended in current submission.) The method of claim 10 wherein the bidding technique includes, in response to winning an auction, bidding at multiple auctions so that multiple bids are pending simultaneously.

15. (Original) The method of claim 10 wherein the bidding technique includes bidding at an auction only after losing another auction.

16. (Original) The method of claim 10 wherein the bidding technique includes, in response to losing an auction, bidding at multiple auctions so that multiple bids are pending simultaneously.

17. (Original) The method of claim 10 wherein the bidding technique includes not bidding at an auction after winning another auction.

18. (Original) The method of claim 10 wherein the bidding technique includes not bidding at an auction after losing another auction.

19. (Original) The method of claim 10 wherein the bidding technique includes basing a decision to bid at an auction on whether a criterion is satisfied.

20. (Original) The method of claim 19 wherein the criterion is based on results of another auction.

21. (Original) The method of claim 19 wherein the criterion is based on status of another auction.

22. (Original) A computer system for bidding on auctions, the system comprising:

a bidding plan storage device;

a define bid component that receives a bidding plan that specifies to bid at multiple auctions and that stores the received bidding plan in the bidding plan storage device; and

a bidding engine that retrieves the bidding plan from the storage device and places bids at auctions in accordance with the bidding plan.

23. (Original) The computer system of claim 22 wherein the bidding plan indicates to place a bid at the auction with the lowest current bid whenever being outbid.

24. (Original) The computer system of claim 22 wherein the bidding plan indicates to win at no more than a certain number of auctions.

25. (Original) The computer system of claim 22 wherein the bidding plan indicates to bid at an auction until reaching a maximum bid amount and then bidding at another auction.

26. (Original) The computer system of claim 22 wherein the bidding plan indicates to bid at an auction until reaching a maximum bid amount and then bidding at multiple auctions.

27. (As amended in current submission.) The computer system of claim 22 wherein the bidding plan indicates to, upon winning a certain number of auctions, bid at that certain number of other auctions.

28. (Original) The computer system of claim 22 wherein the bidding plan indicates to bid at an auction only if a condition relating to another auction is satisfied.

29. (Original) The computer system of claim 28 wherein the condition is winning the auction.

30. (Original) The computer system of claim 28 wherein the condition is losing the auction.

31. (Original) The computer system of claim 28 wherein the condition is when the bidding at the auction exceeds a maximum price.

32. (Original) The computer system of claim 22 wherein the multiple auctions are conducted by different entities.

33. (As amended in current submission.) A computer system for bidding on auctions, the system comprising:

means for receiving a bidding plan that specifies to bid at multiple auctions; and

means for placing ~~bid on~~ bids at auctions in accordance with the bidding plan.

34. (Original) The computer system of claim 33 wherein the bidding plan indicates to place a bid at the auction with the lowest current bid whenever being outbid.

35. (Original) The computer system of claim 33 wherein the bidding plan indicates to bid at an auction only if a condition relating to another auction is satisfied.

36. (Original) The computer system of claim 35 wherein the condition is winning the auction.

37. (Original) The computer system of claim 35 wherein the condition is losing the auction.

38. (Original) The computer system of claim 35 wherein the condition is when the bidding at the auction exceeds a maximum price.

39. (Original) The computer system of claim 33 wherein the multiple auctions are conducted by different entities.

40. (Original) A computer-readable medium containing instructions for controlling a computer system to bid at auctions, by a method comprising:

receiving an indication of a plurality of auctions;

receiving an indication of a bidding technique to apply to the indicated auctions; and

participating in some of the indicated auctions in accordance with the indicated bidding technique.

41. (Original) The computer-readable medium of claim 40 wherein the bidding technique indicates to place a bid at the auction with the lowest current bid whenever being outbid.

42. (Original) The computer-readable medium of claim 40 wherein the bidding technique indicates to bid at an auction only if a condition relating to another auction is satisfied.

43. (Original) The computer-readable medium of claim 42 wherein the condition is winning the auction.

44. (Original) The computer-readable medium of claim 42 wherein the condition is losing the auction.

45. (Original) The computer-readable medium of claim 42 wherein the condition is when the bidding at the auction exceeds a maximum price.

46. (As amended in current submission.) The computer-readable medium of claim 40 wherein the plurality of auctions are conducted by different entities.

47. (As amended in current submission.) The computer-readable medium of claim 40 wherein the plurality of auctions are hosted by at least two different servers.

EVIDENCE APPENDIX

In a December 31, 2003 amendment under 37 C.F.R. § 1.111 responding to an Office Action dated October 10, 2003, Appellant submitted pursuant to 37 C.F.R. § 1.131 the declaration of Suresh Kumar establishing Appellant's invention in this country prior to the September 3, 1999 priority date of U.S. Patent No. 6,415,270, issued to Rackson et al. ("Rackson"). A subsequent Office Action dated March 26, 2004, no longer relied on the Rackson reference as prior art, and removed the rejections based upon the Rackson reference that were made in the Office Action dated October 10, 2003. Appellant submits herewith a copy of the declaration of Suresh Kumar.

In an August 19, 2005 amendment under 37 C.F.R. § 1.116 responding to an Office Action dated June 16, 2005, Appellant submitted copies of relevant pages from AUCTION THEORY (Academic Press, ed., Elsevier Science) (2002), authored by professor Vijay Krishna of the Pennsylvania State University, to illustrate the distinction between "multiple auctions" and "a single auction of multiple items." Appellant submits herewith copies of the submitted pages.

Attorney Docket No. 24976-8029

Express Mail Label Express Mail No. EV343556624US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	SURESH KUMAR	EXAMINER:	POINVIL, FRANTZY
APPLICATION NO.:	09/531,703	ART UNIT:	3628
FILED:	3/20/2000	CONF. NO:	6170
FOR:	**METHOD AND SYSTEM FOR BIDDING ON MULTIPLE AUCTIONS**		

Declaration of Suresh Kumar Under 37 C.F.R. § 1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Suresh Kumar, solemnly declare and state that:

1. I am the sole inventor of the invention described and claimed in U.S. Patent Application No. 09/531,703 filed on March20, 2000.

2. Prior to September 3, 1999, I prepared a written description of my invention and submitted it to the in-house counsel of my employer. The document containing my written description is entitled "Software agent for placing bids on multiple related items in an Internet Auction" and is attached to this Declaration as Exhibit A with non-relevant portions redacted.

3. After I submitted the document of ExhibitA to in-house counsel, I was asked by in-house counsel to meet with and explain my invention to the patent attorney who was to prepare and file the patent application. The meeting was arranged and scheduled for September 21, 1999. On that day, I explained my invention to the patent attorney. I subsequently answered follow-up questions of the patent attorney, and reviewed and commented on the draft specification and drawings.

4. Exhibit B describes a number of events relating to the preparation and filing of my patent application that occurred from before September 3, 1999 to March 20, 2000, which is the filing date of my application.

5. I further declare that all statements made herein of my knowledge are true and that all statements made on information or belief are believed to be true; and further, that the statements are made with the knowledge that the making of willful or false statements or the like is punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code and may jeopardize the validity of any patent issuing from this patent application.

Dated this 11 day of December, 2003.

V. S. Suresh Kumar

Suresh Kumar

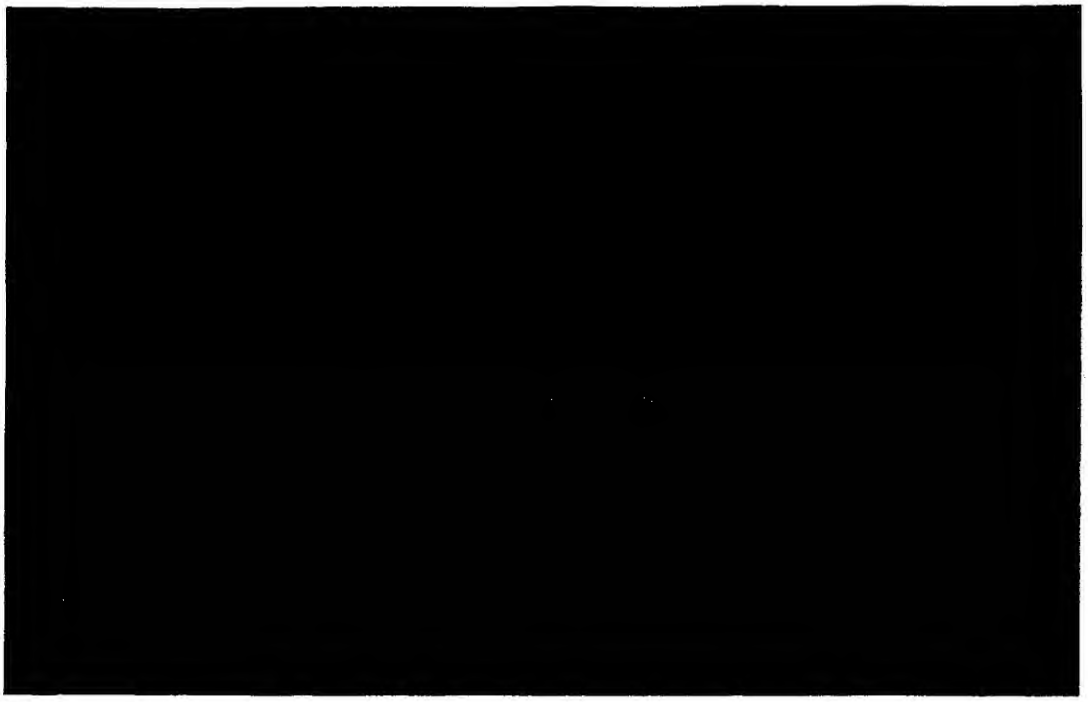
EXHIBIT A

Software agent for placing bids on multiple related items in an Internet Auction.

Software agent for placing bids on multiple related items in an Internet Auction				Office Use Only
				Enter disclosure reference number
Inventor Name	Extension	e-Mail	Dept.	Date submitted: [redacted]
Suresh Kumar	[redacted]	[redacted]	Software	

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]



Detailed Description of Invention

This invention extends the BidClick type of automatic bidding agent to span multiple auctions. The software agent acts on behalf of the user and allows the user to participate in several auctions simultaneously, while ensuring that his bids in the different auctions are related. The invention consists of

- a software system to track the progress of multiple auctions
- an interface to allow the user to specify the set of auctions that the user wants to be related and tracked
- an interface to allow the user to specify a set of rules that define how the items are to be related
- a software system to place a bid on behalf of the user in any of these auctions based on the rules specified by the user

This is shown conceptually in Figure 3.

The software agent bids on sets of related auctions to ensure

- that the user wins in at most m out of *n* auctions in a set with either
  - minimizing the winning bid amounts, or
  - winning m among *n* items in a preferred order (trying to win#2 first and then #1,

but winning at most one)

- that the user has a chance of winning in one or more auctions from a set only if he wins in one or more auctions in another set
- or some combination of the above.

As a simple example, the user can instruct the agent to participate in five different auctions (say of five different bicycles), but drop out from the other two if he is successful in any three (the user wants to own at most three bikes). As another example, the agent can be instructed to bid such that the user will win item A only if he wins item *B*. The logic involved in placing bids on two auctions such that the user will win in only one, and with the minimum bid is shown in Figure 4. As yet another example, the agent can be instructed to bid among four items *a,b,c,d* such that it will win *d* only if it wins one from *a,b,c*, and that it will win at most one from *a,b,c*, with the preference of winning *b* if possible over a and *c*. The logic involved in placing bids on two auctions such that the user will win in at most one and with a preference of winning one auction over another is shown in Figure 5.

[redacted]

To generalize, the software agent takes the set of items, highest price list and the relations and places bids on the set on behalf of the user. The agent can support the user intentions by following two algorithims to decide when to place a bid and on what item to place it:

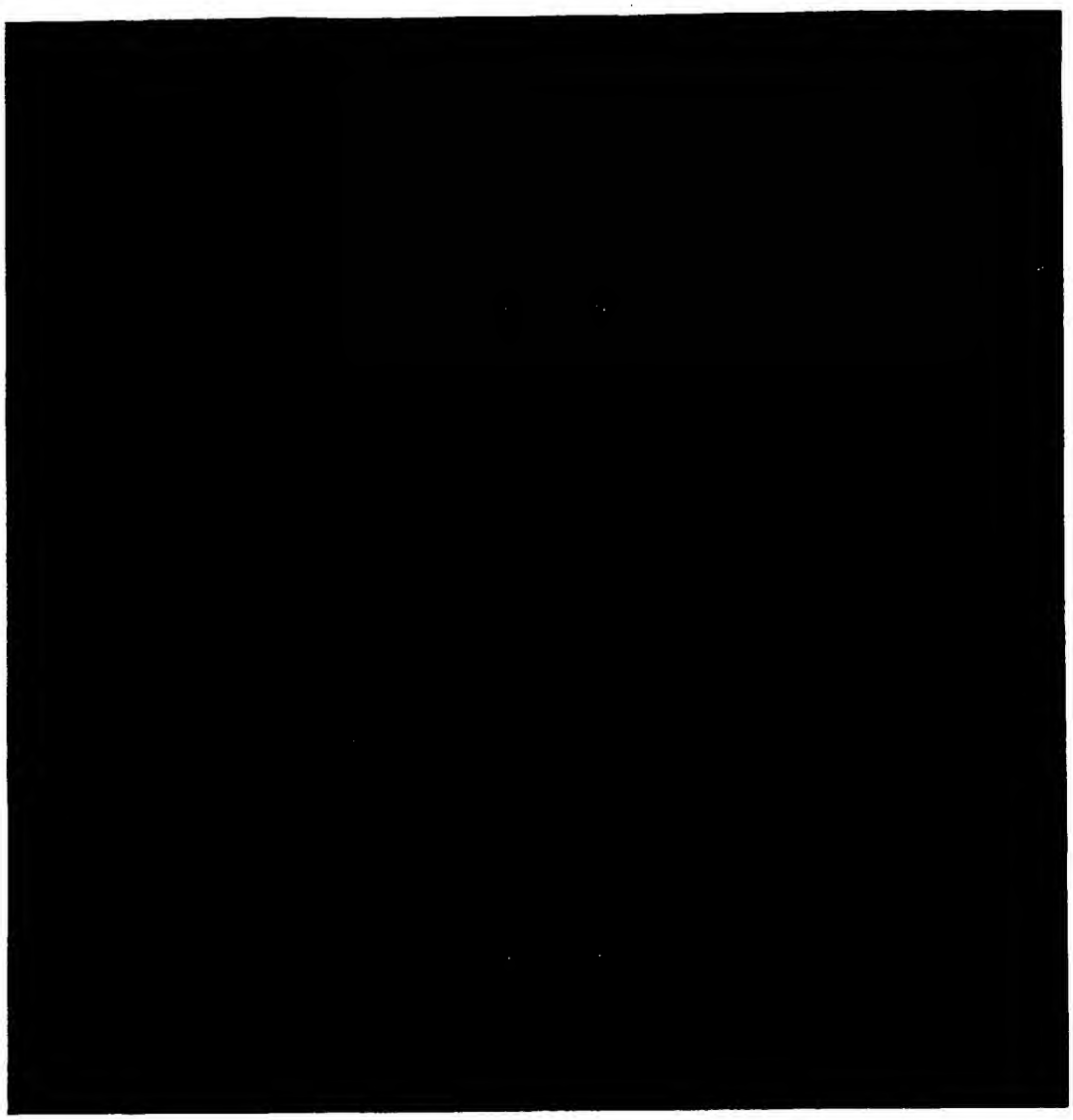
- Entering the bidding process on an item depends not only on the item in question and the current bid, but also on all the other items in the set and their bid status.

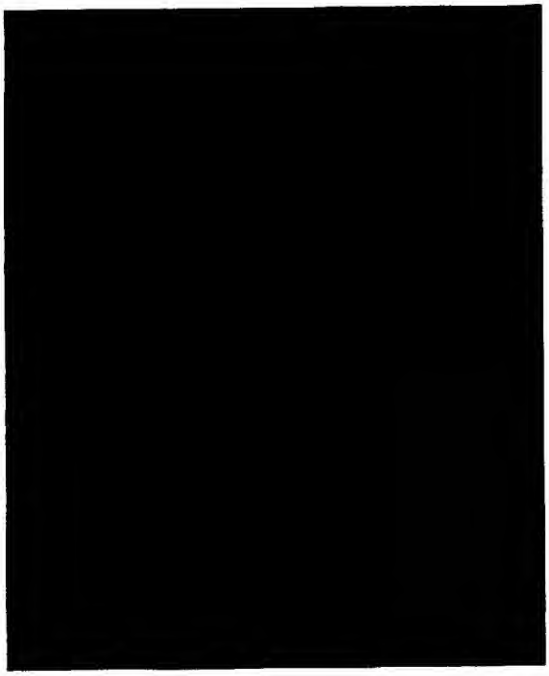
  The system starts the bid on an item if and only if all the preconditions for participating in that auction are satisfied. The preconditions are based on the status of all the other items in the set and the rules that the customer has applied. For example, if the user has indicated "prefer to get A or B or C in that order", then the system will not start bidding on B until it drops out of A, and will not start bid on C until it drops out of A and B.

- A bidding process on an item can be terminated not only based on the current bid on the item and the maximum price set by the user for that item, but also by bid status on other items in the set.

  If the system wins an item, it will terminate bidding on all items in the set that are affected by the win. If we follow the previous example, if the system drops out of A and therefore starts to bid on B, and then wins B; the system will immediately stop bidding on C.

[redacted]





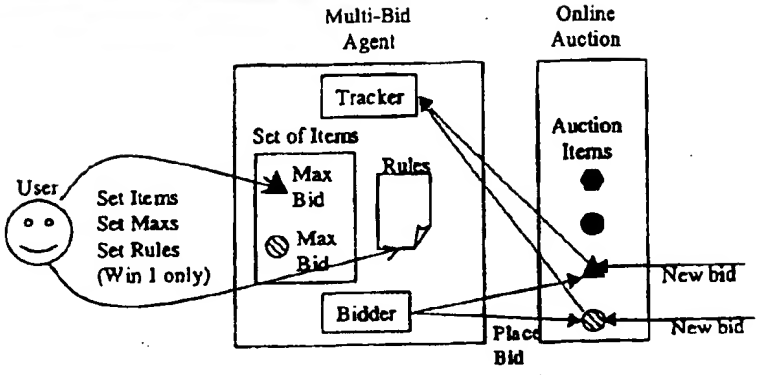


Figure 3. Multiple Items Bidding Agent

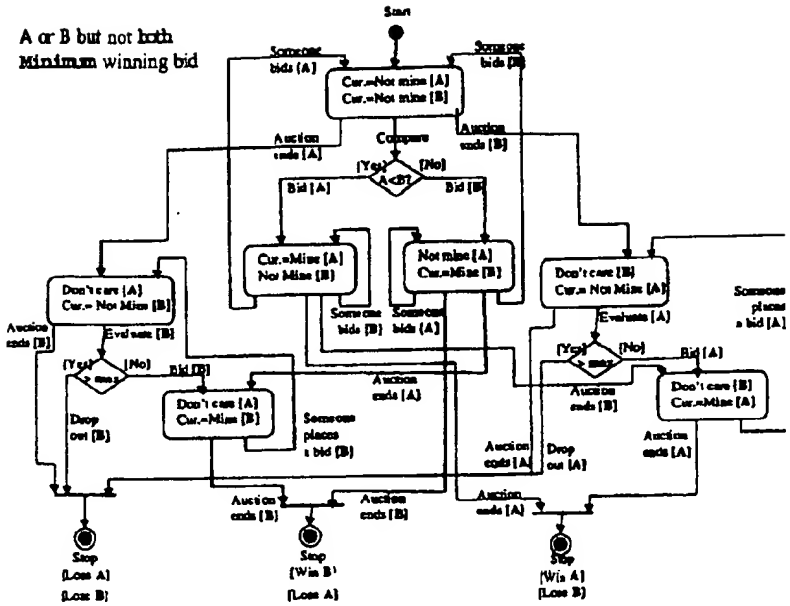


Figure 4.Logic for bidding on two items, winning at most one while minimize bid amount

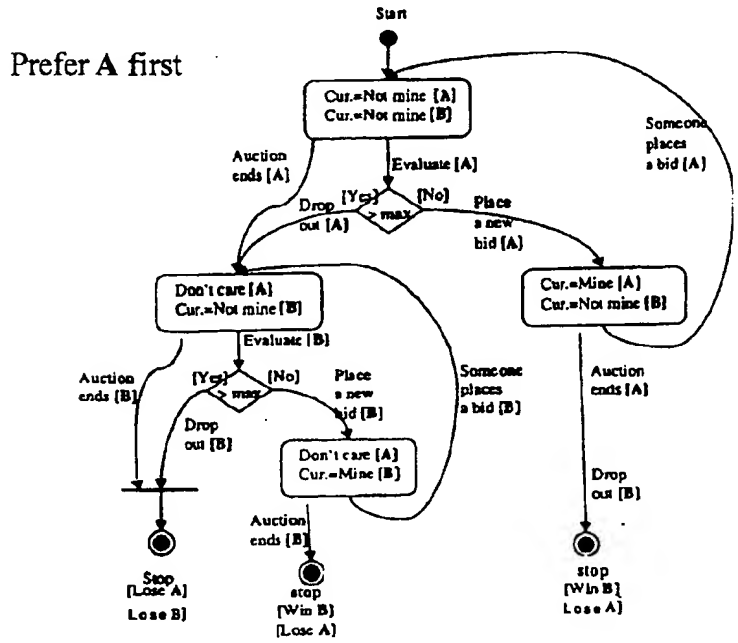


Figure 5. Logic for bidding on two items, trying to win one in preference over another

EXHIBIT B

Some events relating to applicant's efforts at reducing invention to practice.

DATE	DESCRIPTION
Prior to 9/3/99	Inventor Suresh Kumar disclosed the invention to in-house counsel
09/21/99	Inventor and his patent attorney, Maurice J. Pirio, met to discuss the invention
10/05/99	Inventor and attorney corresponded via electronic mail regarding the invention
11/17/99	Inventor and attorney corresponded via electronic mail regarding the potential prior art
12/06/99	Inventor and attorney corresponded via electronic mail regarding the invention
12/13/99	Inventor and attorney corresponded via electronic mail regarding the invention
12/13/99	Attorney sent draft of patent application to Inventor
01/04/00	Inventor and attorney corresponded via electronic mail regarding the draft patent application
02/07/00	Inventor and attorney corresponded via electronic mail regarding the draft patent application
02/18/00	Inventor and attorney corresponded via electronic mail regarding the draft patent application
03/02/00	Inventor and attorney corresponded via electronic mail regarding the draft patent application
03/17/00	Inventor and attorney corresponded via electronic mail regarding the draft patent application
03/18/00	Inventor and attorney corresponded via electronic mail regarding the draft patent application
03/20/00	Attorney filed patent application with the U.S.P.T.O.

Auction Theory

Vijay Krishna
Department of Economics
Pennsylvania State University
University Park, Pennsylvania

ACADEMIC PRESS
An Elsevier Science Imprint

San Diego San Francisco New York Boston London Sydney Tokyo

This book is printed on acid-free paper. ♾

Academic Press
An imprint of Elsevier Science
525 B Street, Suite 1900, San Diego, California 92101-4495, USA
http://www.academicpress.com

Academic Press
84 Theobalds Road, London WC1X 8RR, UK
http://www.academicpress.com

Library of Congress Catalog Card Number: 2001098962

International Standard Book Number: 0-12-426297-X

PRINTED IN THE UNITED STATES OF AMERICA
04 05 06 07 9 8 7 6 5

12

An Introduction to Multiple Object Auctions

In this part of the book we turn to the study of situations in which multiple, related objects are to be sold. The objects may be physically identical, say multiple cases of the same wine or treasury bills of the same denomination, or they may be physically distinct but still be good substitutes, say different apartments in the same building or different paintings by the same artist, so that the marginal value of acquiring a second item, say, is lower than the value of the first. Alternatively, the objects may be complements—that is, the value derived from a particular object may be greater if another has already been obtained. For instance, a philatelist may value a collection of stamps more than the sum of the values of the individual stamps. Similarly, how much an airline values an airport landing slot may increase with the number of slots it has already acquired.

Not surprisingly, when multiple objects are to be sold, many options are open to the seller. First, the seller must decide whether to sell the objects separately in *multiple auctions* or jointly in a *single auction.* In the former case, the objects are sold one at a time in separate auctions—conducted sequentially, say—in a way that the bids in the auction for one of the objects do not directly influence the outcome of the auction for another. In the latter case, the objects are sold at one go in a single auction, but not necessarily all to the same bidder, and the bids on the various objects collectively influence the overall allocation.

Second, the seller must choose among a variety of auction formats, and there is a wide range of possibilities to choose from. For instance, if the seller decides to sell the objects one at a time in a sequence of single-object

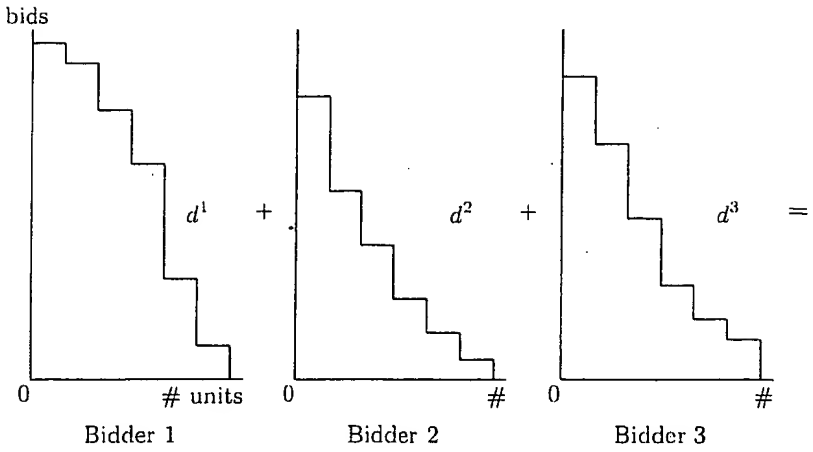


FIGURE 12.1. Individual Demand Functions

auctions, there is still the question of the particular auction form—first-price, second-price, or some other format—to adopt. If the seller decides to sell the objects at one go in a single auction, there are also many possibilities. We begin by outlining the workings of a few auction forms for the sale of multiple units of the same good at one go, returning to study multiple one at a time, sequential, or simultaneous auctions later.

12.1 Sealed-Bid Auctions for Selling Identical Units

Three sealed-bid auction formats for the sale of K identical objects are of particular interest. The first two are important on practical grounds—they are widely used in real-world auctions—and the last, although not widely used, is of special interest for theoretical reasons. All three are intended to be used in situations in which the marginal values are declining—that is, the value of an additional unit decreases with the number of units already obtained.

D. The *discriminatory* (or "pay-your-bid") auction.

U. The *uniform-price* auction.

V. The *Vickrey* auction.

In each of these auctions, a bidder is asked to submit K bids b_k^i, satisfying $b_1^i \geq b_2^i \geq \ldots \geq b_K^i$, to indicate how much he is willing to pay for each additional unit. Thus, b_1^i is the amount i is willing to pay for one unit, $b_1^i + b_2^i$ is the amount he is willing to pay for two units, $b_1^i + b_2^i + b_3^i$ is

RELATED PROCEEDINGS APPENDIX

There are no decisions rendered by a court or the Board in any proceeding identified in the Related Appeals and Interferences section.